PacifiCorp - Stakeholder Feedback Form

2019 Integrated Resource Plan

PacifiCorp (the Company) requests that stakeholders provide feedback to the Company upon the conclusion of each public input meeting and/or stakeholder conference calls, as scheduled. PacifiCorp values the input of its active and engaged stakeholder group, and stakeholder feedback is critical to the IRP public input process. PacifiCorp requests that stakeholders provide comments using this form, which will allow the Company to more easily review and summarize comments by topic and to readily identify specific recommendations, if any, being provided. Information collected will be used to better inform issues included in the 2019 IRP, including, but not limited to the process, assumptions, and analysis. In order to maintain open communication and provide the broader Stakeholder community with useful information, the Company will generally post all appropriate feedback on the IRP website unless you request otherwise, below.

Date of Submittal 5/22/2019

*Name: Tom Crank Title: Representative

*E-mail: Thomas.Crank@wyo.leg Phone: 307-727-6810

*Organization: Wyoming House District 18

Address: 119 Wood Tick Court

City: Kemmerer State: Wyoming Zip: 83101

Public Meeting Date comments address: Click here to enter date. ☒ Check here if not related to specific meeting

List additional organization attendees at cited meeting: Click here to enter text.

*__IRP Topic(s) and/or Agenda Items:__ List the specific topics that are being addressed in your comments.
General Comments concerning Rocky Mountain Power's 2019 IRP through May 15, 2019

I would first like to thank Rocky Mountain Power for allowing this process to proceed and hope that science and economic diligence help solve the CO2 issue which all this is predicated on. Being a resident of Kemmerer, Wyoming, the community finds itself in the direct cross hares of your 2019 IRP and possible early coal plant closures. I believe everyone in the region understands the paradigm has changed with the country's perspective on CO2, fossil fuels and in particularly coal. It's easy to assign a bad guy in these issues. You are faced with a monumental task in determining what is the most cost effective, most reliable and most resilient electrical power supply for your customers for the next 20 or 30 years. You are faced with comments from far ends of both spectrums, some advocating complete and quick dismantling of the coal fleet to those that would have you totally dismantle the renewable upstarts. These comments are written without a staff of well-paid Oakland attorneys from lobbying groups and are intended to only request you do not limit the IPR process and economic analysis to just dollars and projected costs and or cost savings.

The Naughton Power Station and the Westmoreland Kemmerer mine are located just 3 miles west (upwind) of Kemmerer. The power plant and mine are the economic backbone of all of Lincoln County and have direct impacts to Uinta and Sweetwater Counties. The Bridger Power Station and its Bridger Coal mine are also directly in the plant closure cross hairs. Your employees and the communities in which they live and do business have come to rely on the jobs created by these facilities. Reliability on unknown and thus unreliable storage options seems counter to the argument.

Question 1.

Socioeconomics must play a significant role in the analysis. Stranded assets must be accounted for. This must include not only RMP assets but also those of the communities whom have made commitments based on projected taxes. Until recently, these coal plants had projected life's going out another 10 or 20 years. Small businesses have made commitments to service your facilities and have allocated assets to do so. The early closure of any of your coal units can

be expected to leave these communities and local businesses with stranded assets they have no way of recovering costs on. Your stranded assets will be straight forward to document. The cost of stranded assets to the communities and service providers will not be an easy task.

PacifiCorp Response:

Question 1.

PacifiCorp appreciates your feedback and recognizes the importance of establishing a resource plan with consideration of reliability, deliverability, implementation, employee and community impacts.

The Integrated Resource Plan (IRP) helps establish a data set by evaluating economic outcomes for retail customers, while considering risk associated with planning uncertainties. This data set is one element of PacifiCorp's resource plan and associated decision making. At this stage, the IRP process has been focused on the data set. Nonetheless, PacifiCorp is focused on ultimately delivering a resource plan that considers the impact on our employees and the communities in which they live. At this time, analysis for the 2019 IRP is ongoing and a final least-cost, least-risk preferred portfolio has not been selected. PacifiCorp has entered the portfolio-development phase in the IRP, but has not yet established a preferred portfolio nor an associated action plan to deliver that portfolio. No final decisions have been made based on analysis performed to date.

These same communities have provided your customers with what was, until recently, the most cost-effective means of electrical power generation. Even with severance taxes and property taxes on fossil fuels, coal remained the least cost electrical power generated until your recent IRP models have indicated it is not. It is hard to believe that politics has not been the swaying factor in this analysis. As an example, Oregon's Senate Bill 1547, which is titled "Elimination of Coal from Electricity Supply" is generally a renewable energy portfolio standard but it's title pretty much sums up the task you are faced with. Move away from coal. If you do so, all prudently incurred costs associated with compliance are recoverable in your rates to customers.

Question 2.

In moving away from coal, you are to also keep with the requirements of the North American Electric Reliability Corporation (NERC) and other regulators. These requirements address not only reliability but also resilience of the power grid. It does us no good to figure out how to replace coal generation with other options if for example, the batteries don't last long enough or the gas line to a plant is shut down and therefore so is the plant. Coal plants typically have storage piles of coal to last for more than a month or two should the supply be interrupted. Reliability and resilience must be paramount.

PacifiCorp Response:

Question 2.

Please see response to question 1 above.

Question 3.

Storage systems which have been presented during some of your IRP presentations look to batteries or pump storage. The actual methods and systems are only presented during the IRP meetings in general terms with no specifics of what the actual technologies will be. In pumped systems, I assume, water is raised by electrical motors during periods of low electrical demand and excess renewable electrical production (the primary source) to a reservoir. The process is then reversed, and the water allowed to flow back down through turbines to generate electricity during periods of low energy production times of the primary source. Efficiency losses which take place must then be overcome by cost savings or reliability in the return flow.

* Required fields

If you need the electrical power to pump the fluid up during low demand, have you not just eliminated a low demand time frame?

If so, how can you assign a low dollar value to the use of the electricity if your system is going to crash if you don't commit to the pumping and the higher demand it creates?

PacifiCorp Response:

Question 3.

Please see the Renewable Resource Assessment for the 2019 IRP on PacifiCorp's website for a description of renewable energy resources considered in the 2019 IRP located at: www.pacificorp.com/es/irp/irpsupport. The Renewable Resource Assessment provides a description of pumped hydro energy storage in Section 5 on page 18, compressed air energy storage (CAES) in Section 6 page 19, and battery storage technology in Section 7 on page 21.

Your customers will all get to pay for it, and it will all just be an accounting operation to say it was the cheap power you pumped it up with and more expensive power when you returned it. Something just seems wrong with the economics of over production on one end with a cost assigned of next to nothing. You then return the energy, less efficiency losses, charge out the returned energy at a higher rate just to keep the system going. With battery storage of unknown or at least unmentioned technology, it is hard to compare environmental costs for there production and future disposal from an outsider.

Question 4.

In reviewing your "Stacked Cases C-34 and C-42" of the coal studies it is noted the CO2 emission cost savings account for 18.6% and 77.0% of the overall benefit associated with accelerated retirement of the Naughton and Bridger Units.

I assume this are projected CO2 credit savings from some type. Is this correct?

If so, how are they determined and verifiable now?

PacifiCorp Response:

Question 4.

The carbon dioxide (CO_2) emission cost savings were presented as information as a percentage of overall benefit associated with accelerated retirement. They are calculated based on the line item detail for each case (see slide 16 of the April 25, 2019 public input meeting by way of example). Specifically, the nominal levelized (benefit)/cost per megawatt hour (MWh) of retirement generation associated with emission savings from early retirement is netted against the emission value associated with replacement resources. That net differential is then divided by the $/MWh net (benefit)/cost to show what percentage is attributed to emission reduction cost savings.

In the early development of both Naughton and Jim Bridger, the locations undoubtably were driven by their proximity to the coal source. The isolated locations, away from populated areas were also considered advantageous so as not to contribute to the metropolitan haze and smog of the times. These sites remain the same and Kemmerer residents don't wake up and worry if it will be another yellow or red haze action alert day. The demise of these plants, if equipped with current environmental controls, in the locations they exist, is not the smoking gun fix to the regional haze that metropolitan sprawl has exasperated.

In closing, reliability and resilience must be maintained or improved. RMP must get this right for your employees, your customers, your service providers and the communities that depend on you to remain viable. Again, everyone in the region understands that environmental issues are out there. If you are from Wyoming you are more than likely, at least,

a little bit of a conservationist. We get it, just don't let your analysis miss all the science and all the technology to help fix this problem and not just rely on political demands from one side that demand a looser. Good luck, we are all going to need it.

☐ Check here if any of the following information being submitted is copyrighted or confidential.

☐ Check here if you do **not** want your Stakeholder feedback and accompanying materials posted to the IRP website.

*__Respondent Comment:__ Please provide your feedback for each IRP topic listed above.
Click here to enter text.

Data Support: If applicable, provide any documents, hyper-links, etc. in support of comments. (i.e. gas forecast is too high - this forecast from EIA is more appropriate). If electronic attachments are provided with your comments, please list those attachment names here.
Click here to enter text.

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.
Click here to enter text.

Please submit your completed Stakeholder Feedback Form via email to IRP@Pacificorp.com

Thank you for participating.

* Required fields